

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Original) An apparatus for decompressing video data, comprising:  
a start code detector to convert a portion of a stream of video data into a stream of data tokens in response to detecting a start code sequence in said stream of video data; and  
a pipeline having stages and being capable of decoding video data , the start code detector being coupled to send the data tokens to the pipeline.
2. (Original) The apparatus of claim 1, wherein a plurality of the stages of said pipeline have operating modes responsive to the format of said tokens.
3. (Original) The apparatus of claim 1, further comprising an inserter of search mode tokens to transmit search mode tokens into the stream of video data.
4. (Original) The apparatus of claim 1, wherein the start code detector is capable of searching for video start codes complying with different formats.
5. (Original) The apparatus of claim 4, wherein said formats include formats complying with at least two of the video standards selected from the group consisting of JPEG, MPEG, and H.261.
6. (Original) The apparatus of claim 3, wherein the start code detector ignores video data until a video start code is found in response to receiving one of the search mode tokens.
7. (Original) The apparatus of claim 1, further comprising:  
two-wire interfaces coupling the consecutive stages of the pipeline.

8. (Original) The apparatus of claim 7, wherein the two-wire interfaces transmit data valid and data acceptance signals.
9. (Original) The apparatus of claim 1, wherein the start code detector is adapted to introduce new tokens into the stream of video data at detected start code sequences.
10. (Original) The apparatus of claim 2, wherein a portion of the stages of the pipeline reconfigure themselves to process data in response to receiving predetermined types of tokens.
11. (Original) The apparatus of claim 9, wherein the start code detector introduces picture end tokens into the stream of video data.
12. (Original) The apparatus of claim 1, wherein the start code detector is a hardware device.
13. (Original) The apparatus of claim 1, wherein the pipeline includes:
  - a Huffman decoder coupled to receive data from the start code detector;
  - a token formatter coupled to data from the Huffman decoder;
  - an inverse modeler coupled to receive data from the token formatter; and
  - an inverse quantizer coupled to receive data from the inverse modeler.
14. (Original) A method for decoding encoded video data, comprising:
  - receiving a portion of a video data stream in a multi-stage pipelined decoder;
  - inserting tokens into the received portion of the video data stream at least one of the tokens being a search mode token;
  - detecting the search mode token in a special one of the stages; and
  - searching for a start code token in the video data stream in response to detecting the search mode token in the special one of the stages.

15. (Original) The method of claim 14, further comprising:  
making a random access into the data stream to receive the portion of the video stream; and  
wherein the search mode token is inserted in response to making the random access.
16. (Original) The method of claim 15, wherein the random access results from one of an error and a channel switch.
17. (Original) The method of claim 15, further comprising:  
reconfiguring stages of the decoder to decode video data in response to detecting the start code token.
18. (Original) The method of claim 17, wherein searching recognizes start code tokens corresponding to video data encoded according to one of the standards MPEG, JPEG, and H.261.
19. (Original) A pipelined decoder for processing encoded video data, comprising:  
a pipeline having a plurality of stages for receiving and decoding a portion of a video data stream;  
a means for inserting tokens into the video data stream at least one of the tokens being a search mode token; and  
a start code detector to search for start code tokens in the video data stream in response to detecting the search mode token.
20. (Original) The decoder of claim 19, wherein the means for inserting inserts a search mode token into the data stream in response to making a random access into the video data stream.

21. (Original) The decoder of claim 20, wherein the random access results from one of an error and a channel switch.
22. (Original) The decoder of claim 20, wherein a plurality of the stages reconfigure themselves to decode video data in response a start code token.
23. (Original) The decoder of claim 22, wherein the start code token corresponds to video data encoded according to one of the standards MPEG, JPEG, and H.261.
24. (Original) The decoder of claim 20, further comprising:  
a semiconductor substrate, the pipeline, means for inserting and start code detector being located on the substrate.
25. (Original) A system for decoding video data into picture frames, comprising:  
a start code detector to search for a start code sequence in a stream of video data in response to detecting a search mode token therein and to convert a portion of the stream of video data into data tokens in response to detecting a start code sequence in said stream of video data; and  
a decoder coupled to receive the data tokens from the start code detector and to decode the received data tokens into picture frames, the decoder capable of decoding multiple standards.
26. (Original) The system of claim 25, further comprising an inserter of search mode tokens coupled to insert search mode tokens into the stream of video data.
27. (Original) The system of claim 25, wherein the standards include two of JPEG, MPEG, and H.261.
28. (Original) The system of claim 25, wherein the decoder further comprises:  
a Huffman decoder;

an inverse quantizer coupled to the Huffman decoder; and  
an inverse discrete cosine transformer coupled to the inverse quantizer.

29. (Original) The system of claim 25, wherein the decoder is a hardware device.